

In the Claims

Please replace all prior versions of claims in the application with the following claims:

1. (Currently Amended) A monolithic component protecting a line against overvoltages greater than a determined positive threshold or lower than a determined negative threshold, including in antiparallel a cathode-gate thyristor and an anode-gate thyristor connected between a first terminal of the line to be protected and a reference voltage, the gate of the cathode-gate thyristor being connected to a negative threshold voltage via a gate current amplification transistor, the gate of the anode-gate thyristor being connected to a positive threshold voltage, characterized in that:

- the monolithic component is made in a substrate of a first conductivity type divided into wells separated by isolating walls, lower surfaces of ~~which are~~ the isolating walls being coated with insulating layers, a lower surface of the substrate being uniformly coated with a lower surface metallization,
- the gate current amplification transistor of the cathode-gate thyristor is made in vertical form in a first well,
- the cathode-gate thyristor is implemented in vertical form in a second well,
- the lower surface metallization links up the collector of the transistor, the anode of the cathode-gate thyristor, and the cathode of the anode-gate thyristor,
- a first front surface metallization connects the cathode of the cathode-gate thyristor to the anode of the anode-gate thyristor,
- a second front surface metallization connects the gate of the cathode-gate thyristor to the emitter of the transistor, and
- a third front surface metallization is in contact with the gate of the anode-gate thyristor.

2. (Previously Presented) The component of claim 1, further including a diode, the anode of which is connected to the gate of the anode-gate thyristor, characterized in that the diode is implemented in the form of a P-type region itself formed in an N-type region, the latter

being formed in the cathode-gate region of the anode-gate thyristor, on the upper surface side of the component.

3. (Previously Presented) The component of claim 1, wherein the gate of the cathode-gate thyristor is connected to a second terminal of the line to be protected.

4. (Previously Presented) The component of claim 1, further ensuring a protective function against overcurrents, in which the gates of the cathode-gate and anode-gate thyristors are interconnected and connected to a second terminal of the line to be protected.

5. (Withdrawn) The component of claim 4, further including a gate current amplification transistor associated with the anode-gate thyristor, characterized in that this transistor, of PNP type, is formed on the upper surface of the component, a collector region extending via isolating walls towards the lower surface and being in contact with the lower surface metallization.

6. (Currently Amended) A monolithic component for protecting a line against overvoltages, comprising:

a substrate of a first conductivity type divided into wells separated by isolating walls, lower surfaces of ~~which are~~ the isolating walls being coated with insulating layers;

a gate current amplification transistor fabricated in vertical form in a first well in the substrate;

a cathode-gate thyristor fabricated in vertical form in a second well in the substrate;

an anode-gate thyristor fabricated in vertical form in a third well in the substrate;

a lower surface metallization connecting the collector of the transistor, the anode of the cathode-gate thyristor, and the cathode of the anode-gate thyristor;

a first front surface metallization connecting the cathode of the cathode-gate thyristor to the anode of the anode-gate thyristor; and

a second front surface metallization connecting the gate of the cathode-gate thyristor to the emitter of the transistor.

7. (Previously Presented) A monolithic component as defined in claim 6, further comprising a third front surface metallization in contact with the gate of the anode-gate thyristor.

8. (Previously Presented) A monolithic component as defined in claim 6, further comprising a diode, an anode of which is connected to the gate of the anode-gate thyristor.

9. (Previously Presented) A monolithic component as defined in claim 8, wherein the diode is implemented as a P-type region formed in an N-type region, the N-type region being formed in the cathode-gate region of the anode-gate thyristor on the front surface of the substrate.

10. (Withdrawn) A monolithic component as defined in claim 6, further comprising a second gate current amplification transistor associated with the anode-gate thyristor.

11. (Withdrawn) A monolithic component as defined in claim 10, wherein the second transistor is formed on the front surface of the substrate, a collector region extending via isolating walls toward the lower surface and being in contact with the lower surface metallization.

12. (Previously Presented) A monolithic component as defined in claim 6, wherein the cathode-gate thyristor and the anode-gate thyristor are connected in antiparallel between a first terminal of the line to be protected and a reference voltage, the gate of the cathode-gate thyristor being connected to a negative threshold voltage via the gate current amplification transistor and the gate of the anode-gate thyristor being connected to a positive threshold voltage.

13. (Previously Presented) A monolithic component as defined in claim 12, wherein the gate of the cathode-gate thyristor is adapted for connection to a second terminal of the line to be protected.

14. (Previously Presented) A monolithic component as defined in claim 12, wherein the gates of the cathode-gate and anode-gate thyristors are interconnected and are configured for a connection to a second terminal of the line to be protected.

15-23. (Canceled)